

CAMERA CALIBRATION USING OFF-AXIS ILLUMINATION  
AND VIGNETTING EFFECTS

ABSTRACT OF THE DISCLOSURE

An imaging device is calibrated using a flat, featureless surface and uniform illumination, relying on the effect of off-axis illumination and vignetting on the reduction of light into the camera at off-axis angles. The effect of the tilt of the camera is also considered. These effects are used to extract intrinsic camera parameters

5 including focal length, principal point, aspect ratio and skew.

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